Project Fact Sheet

Strategic Value Analysis: GIS Development

GOAL

- Improve the reliability/quality of California's electricity by identifying where renewable distributed generation systems can be located to help alleviate transmission and distribution capacity and congestion problems in the state.

PROJECT DESCRIPTION

The purpose of this contract is to supplement an existing Geographic Information System (GIS) developed and operated by the California Department of Forestry (CDF) to help identify strategic locations for using renewable energy distributed generation (DG) systems. To accomplish this goal, CDF will:

- analyze existing spatial information related to energy use, environmental and demographic characteristics of sub-regions within the state;
- create required data layers on available renewable energy resources; and
- use data on problem areas within California's electricity system developed by another contract (500-00-031).

This project will:

- Collect data sets necessary to create thematic layers on renewable energy resources within California, layers on detailed demographic, environmental, and energy use information, and layers that incorporate the results from the McNeil Technologies (500-00-031) power flow analysis;
- Construct thematic layers and develop methods for running iterative scenarios that help determine optimal locations for renewable generating systems that provide strategic benefit to California's electricity system as well as high public benefits that extend beyond impacts to the electricity system;
- Develop a windows based program (or equivalent process) that enables staff in the PIER Renewables program to remotely access the GIS information, run different and new scenarios based on new data, and collect the associated results;
- Assist in establishing at least two case studies that provide representative and site specific analyses on the use of renewable distributed generation systems to effectively and affordably address California electricity system problems; and
- Provide a written report and GIS-based maps depicting the key results obtained from the various GIS scenarios, and the two case studies. The key results will include identification of

the optimal locations where renewable generation systems can possibly provide strategic benefit to California's electricity system as well as high public benefits

BENEFITS TO CALIFORNIA

This project will identify areas where renewable DG systems can potentially help address electricity reliability, congestion and power quality problems. At the same time, providing public benefits such as improving air quality, preventing wildfires in high-risk areas, and increasing employment in economically stressed areas of the state.

FUNDING AMOUNT

Commission	$280,000
Match	$0

PROJECT STATUS

This is ongoing project. A kick off meeting has been held with CDF.

Work is progressing in the identification, collection and development of GIS information for the model.

FOR MORE INFORMATION

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